

ABSTRAK

HUBUNGAN *V-SHALE*, *DENSITY*, DAN TOTAL SULFUR BATUBARA BERDASAR DATA *WELL LOGGING* DAERAH DESA KERTA BUANA KECAMATAN TENGGARONG SEBERANG KABUPATEN KUTAI KARTANEGARA PROVINSI KALIMANTAN TIMUR

Oleh :

**Reza Fahriza
115090042**

Telah dilakukan penelitian lapisan batubara pada Formasi Balikpapan dengan menggunakan metode geofisika *well logging*. Penelitian dilakukan di Kecamatan Tenggarong Seberang, Kabupaten Kutai Kartanegara, Provinsi Kalimantan Timur selama.

Penelitian menggunakan data *well logging* yang antara lain *gamma ray log*, *density log* dan hasil uji laboratorium dari hasil pemboran sebanyak lima titik bor. Penelitian dilakukan dengan menganalisa defleksi kurva *well logging* serta menghitung harga indeks *gamma ray*, volume *shale*, kadar abu, total moisture, total sulfur dan nilai kalori untuk menganalisa kualitas batubara. Pada penelitian ini juga dilakukan rekonsiliasi antara data bor dan *well logging*, yaitu pengumpulan dan pencocokan antara kedua data tersebut.

Hasil analisa penelitian lapisan batubara ditinjau dari densitas, *vshale*, dan kualitas batubara terutama total sulfur menunjukkan hasil yang baik dengan hubungan berada di kisaran lemah (26,4 % untuk total sulfur vs *v-shale*) hingga sedang (49,4 % untuk total sulfur vs densitas). kisaran densitas berada di angka 1.274 - 1.815 gr/cc, *v shale* di kisaran 0.00089 - 0.25068, nilai total sulfur kisaran 0.14 – 0.37 % dan parameter kualitas batubara yang lain (nilai kalori kisaran 5296 – 5987 kal/g, nilai *total moisture* di kisaran 18.92 - 24.89 %, dan nilai kandungan abu di kisaran 1.85 – 5 %).

Kata Kunci : *Well Logging*, *gamma ray log*, *density log*, *v shale*, total sulfur, batubara, kualitas.

ABSTRACT

RELATIONS V - SHALE , DENSITY , AND TOTAL SULFUR COAL BY WELL LOGGING DATA KERTA BUANAVILLAGE OF TENGGARONG SEBERANG DISTRICT KUTAI KARTANEGARA EAST KALIMANTAN PROVINCE

By:

**Reza Fahriza
115090042**

Has research on the coal layer Balikpapan Formation using geophysical well logging. The study was conducted in the District Tenggara Seberang, Kutai Kartanegara, East Kalimantan Province for.

The research used data among other well logging the gamma ray log, density log and laboratory test results from the drilling five drill point. The study was conducted by analyzing the deflection curve of well logging and gamma ray calculate the index price, the volume of shale, ash, total moisture, total sulfur and calorific value of coal quality analyzes. In this study was also carried out a reconciliation between the drill data and well logging, collection and matching between the two data.

Results of analysis of coal seam research in terms of density, v shale, and coal quality, especially total sulfur showed good results with weak ties are in the range (26.4% for total sulfur vs. v-shale) to moderate (49.4% of total sulfur vs. density). the range of density stands at 1274-1815 g / cc, v shale in the range of 0.00089 - 0.25068, the value of total sulfur range of 0:14 to 0:37% and the parameters of quality of coal to another (the calorific value range of 5296-5987 cal / g, the value of total moisture in the range of 18.92 - 24.89%, and the value of ash content in the range of 1.85 - 5%).

Keywords: Well Logging, gamma ray log, density log, v shale, total sulfur, coal quality.